

What is claimed is:

CLAIMS

1. A method for migrating managed state for a Java based application, comprising the operations of:

5 executing a first Java module on a first server, the first Java module including a first entity bean and a first state object in communication with the first entity bean, the first state object storing a state of the first entity bean;

replicating the first state object to a state server; and

starting a second Java module on a second server, the second Java module having
10 a second state object.

2. A method as recited in claim 1 wherein the second state object obtains a related managed state through migration of state from the first server.

15 3. A method as recited in claim 1, wherein the second state object obtains a related managed state through recovery of the state replicated in the state server.

4. A method as recited in claim 1, wherein the state server is a memory replicated state server.

5. A method as recited in claim 1, wherein the state server is a disk replicated state server.

5 6. A method as recited in claim 1, wherein the second Java module further includes a second entity bean in communication with the second state object, wherein the second state object stores a state of the second entity bean.

7. A method as recited in claim 6, wherein checkpointing is used to replicate
10 the first state object to the state server.

8. A method as recited in claim 7, wherein a migration-capable non-replicated state for the first entity bean is transferred to the second server.

15 9. A method as recited in claim 8, wherein a first replicated state manager executing on the first server transfers the migration-capable non-replicated state to a second replicated state manager executing on the second server.

10. A method as recited in claim 9, wherein the migration-capable non-replicated state is transferred using a replicated state manager specific transfer protocol.

11. A system for migrating managed state for a Java based application,
5 comprising:

a first server executing a first Java module, wherein the first Java module includes a first entity bean and a first state object in communication with the first entity bean, the first state object storing a state of the first entity bean;

a state server in communication with the first server, the state server capable of
10 managing replica of the first state object; and

a second server in communication with the state server and the first server, the second server capable of starting a second Java module having a second state object.

12. A system as recited in claim 11, wherein the second state object is
15 populated with managed state using the replica of first state object on the state server.

13. A system as recited in claim 11, wherein the second state object is populated with managed state using a copy of the first state object as managed in memory by a replicated state manager.

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14. A system as recited in claim 11, wherein the state server is a memory replicated state server.

15. A system as recited in claim 11, wherein the state server is a disk replicated state server.

16. A system as recited in claim 11, wherein the second Java module further includes a second entity bean in communication with the second state object, wherein the second state object stores a state of the second entity bean.

17. A system as recited in claim 16, wherein checkpointing is used to replicate the first state object to the state server.

18. A system as recited in claim 17, wherein a migration-capable non-replicated state for the first entity bean is transferred to the second server.

19. A system as recited in claim 18, further including a first replicated state manager executing on the first server, the first replicated state manager capable of providing the migration-capable non-replicated state to a second replicated state manager executing on the second server.

20. A system as recited in claim 19, wherein the migration-capable non-replicated state is transferred using a replicated state manager specific transfer protocol.

5 21. A method for initializing migrating managed state for a Java based application, comprising the operations of:

sending a request to a second server to start a migrated module, the request being sent from a control module of a first module executing on a first server, wherein the control module passes a schema specification;

10 creating the migrated module on the second server;

creating a state partitions for the migrated module based on the passed schema specification; and

recovering a managed state for the migrated module from a state server.

15 22. A method as recited in claim 21, further comprising the operation of initializing the managed state for the migrated module using a replicated state manager executing on the first server.

23. A method as recited in claim 22, wherein the replicated state manager uses a replicated state manager specific protocol to transfer initialization data to the migrated module.

5 24. A method as recited in claim 21, wherein a replicated state manager creates the state partitions for the migrated module based on the passed schema specification.

10 25. A method as recited in claim 24, wherein the replicated state manager further creates SMUs for the migrated module.

26. A method as recited in claim 25, further comprising the operation of informing the control module to switch control to the migrated module.

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